

# **AUTOMATED APPARATUS AND METHOD FOR FRUIT TESTING**

## **I. ABSTRACT OF DISCLOSURE**

---

AK  
5 A fruit tester provides a motor driven intrusive plunger with associated sensors to determine digital data indicative of plunger position, force resisting plunger intrusion and constant pressure creep. Sensor data is presented to a computer for storage, analysis and feedback control of the plunger. The plunger powering train includes a belt driven ball screw translator to convert rotary to linear motion and  
10 an "S" type stress block with plural bridge interconnected strain gauges to sense pressure resisting intrusion to allow accurate measurements. Methods of analysis are disclosed to determine both resistance to plunger penetration and plunger creep at fixed pressure, in each of at least two concentric  
15 zones of a fruit, which are related by software for accurate determination of fruit condition as a function of time, both present and future.

---